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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,502	10/02/2000	Yoshio Hashibe	0694-134	4484

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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/677,502

Applicant(s)

HASHIBE ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 10, 2004 has been entered.

2. Claims 1, 2, 4, 6, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within line 5 of claim 1, the text, "resinand", is incorrect.

3. Claims 1, 2, 4, 6, 8, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support has not been provided for claiming that the film has an average reflectance of "12%-19% for visible rays" (claim 1) or "about 15% for visible light" (claims 11 and 12). The specification only provides support for reflectance values for visible light of 15% or less (page 3) and 12% and 19% (Table 1). The language, "12%-19%" and "about 15%" encompasses values that are not supported by the specification. Data set forth within examples provides support only for values that correspond to the data. Despite applicants' argument, applicants have not established that they were in possession of values derived from the extrapolation of values within the examples at the time of invention. Therefore, the position is

maintained that there is no evidence that applicants were in possession of values that exceed 15% at the time of invention, other than the experimental value of 19%. Contrary to applicants' assertion, the examiner is not requiring *verbatim* language to provide support; however, there must be evidence that support exists for the claim language. Furthermore, contrary to applicants' argument, there is no evidence that there is inherent support for the claimed language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4, 6, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. ('704) in view of GB 2122919.

Friedman et al. disclose the production of fire screening protective glazing laminates, wherein a layer of polymeric material, that corresponds to that of applicants, is sandwiched between layers of fireproof glass plates. Friedman et al. further disclose that the glass plates may

be surface treated with materials that yield heat reflectance. See abstract and column 6, lines 18-29.

6. Friedman et al. are silent with respect to the surface treatments that may be applied to the glass; however, materials, such as tin doped indium oxides, were known to be useful for such applications at the time of invention. This position is supported by the teachings of GB 2122919. See abstract; page 5; and page 13, lines 47-51. Furthermore, the reference teaches that the wave shielding properties can be freely varied simply by varying such characteristics as thickness of the layer and the amount of tin used.

7. Therefore, the position is taken that one seeking a non-infrared emissive material would have been motivated to utilize the tin doped indium oxide of GB 2122919 as the heat-ray reflecting material on the glass plates of Friedman et al., so as to arrive at the instant invention. It has been held that it *prima facie* obvious to utilize a known material for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. ('704) in view of GB 2122919 as applied to claims 1, 2, 4, 6, and 9-12 above, and further in view of Terneu et al. ('687).

As aforementioned, the combined teachings of Friedman et al. and GB 2122919 are considered to render obvious applicants' claimed fire-protection glass comprising fireproof glass plates, a resin intermediate layer, and a tin doped indium oxide heat ray reflection film.

However, Friedman et al. and GB 2122919 are silent regarding the double glazing limitation of

claim 8. Still, the use of double glazing to enhance insulation characteristics of glass panels was a known and conventional technique at the time of invention. This position is supported by Terneu et al. See figures and column 6, line 11. Therefore, it would have been obvious to incorporate double glazing into the panels of the primary reference, so as to improve the insulation characteristics of the panels.

9. Applicants' response of September 10, 2004 has been carefully considered; however, applicants' argument that the teachings of GB 2122919 are inapplicable to fire protection glass is not well taken. Though the teachings of GB 2122919 are concerned with such utilities as preventing the heating of automobiles and buildings from solar radiation, the reference is further concerned with utilities that are analogous to applicants' utilities. The reference provides guidance for the modification of the heat wave shielding properties so that the layers or laminations "can be used to great advantage for the peepholes of ovens and furnaces ... and in numerous other applications requiring strong shielding against heat waves without loss of transparency to visible light" (page 13, lines 47-51). Since the temperature and radiation aspects of ovens and furnaces are considered to approximate those of structure fires, one of ordinary skill seeking protection or shielding from such infrared radiation sources would have been motivated to utilize or modify, in accordance with the reference, the disclosed layers or laminations of GB 2122919. Applicants' argument that the tin doped indium oxide layer of GB 2122919 fails to meet the claimed reflectance values has been considered; however, applicants' argument fails to appreciate that the reference is replete with teachings regarding the modification of the layer to

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alter or tailor its properties. See pages 2 and 3, for example. Contrary to applicants' argument, the position is maintained that one of ordinary skill, in possession of the teachings of the reference and aware of the reference's disclosure that the layer can be used in applications requiring strong infrared radiation shielding, would have found it obvious to modify the layer so as to optimize its properties for use in such applications.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent

September 16, 2004


RABON SERGENT
PRIMARY EXAMINER